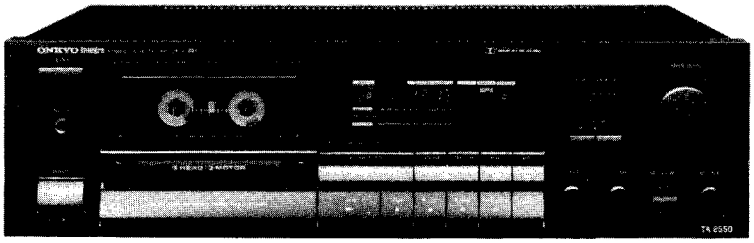
SERIAL NO. 3300

ONKYO SERVICE MANUAL

STEREO CASSETTE TAPE DECK MODEL TA-2550



Black and silver model

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

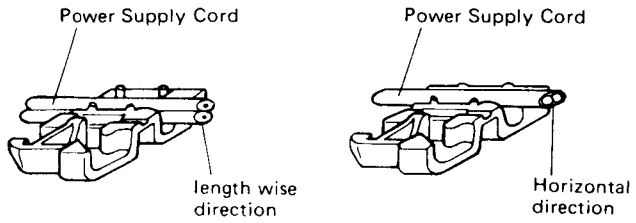
Track Format:	4-tracks, 2-channels
Erasing System:	AC erase
Tape Speed:	4.8 cm/sec. (1-7/8 i.p.s.)
Wow and Flutter:	0.045% (WRMS)
Frequency Response:	20–17,000Hz (Normal) (30–16,000Hz ±3dB) 20–18,000Hz (High) (30–17,000Hz ±3dB) 20–19,000Hz (Metal) (30–18,000Hz ±3dB)
S/N Ratio:	60dB (metal tape, Dolby NR off) A noise reduction of 10dB above 5kHz and 5dB at 1kHz is possible with Dolby B NR. A noise reduction of 20dB at 5kHz is possible with Dolby C NR.
Input Jacks:	Line IN: 2 Input sensitivity: 60mV Input impedance: 50kohms
Outputs:	Line OUT: 2 Standard output level: 500mV (0dB) Optimum load impedance: over 50 kohms Headphone jack: 1 Optimum load impedance: 8 to 200 ohms
Motors:	DC servo motor: 1 DC motor: 2
Heads:	REC/PB: Special Hard Permalloy x 1; Erase head: Ferrite x 1
Power Supply Rating:	AC 220V, 50Hz
Power Consumption:	19 watts
Dimensions:	435(W) x 132(H) x 366(D)mm (17-1/8" x 5-3/16" x 14-3/8")
Weight:	5.8 kg. (12.8 lbs.)

Specifications and external appearance are subject to change without notice because of product improvements.

SERVICE PROCEDURES

1. Replacement of power supply cord

There are two power supply cord outlets on the strainrelief. Insert them in prescribed direction to ensure safety. AS-UC-3 (UD<120V> model) should be inserted lengthwise and other types of cords should be inserted horizontally.



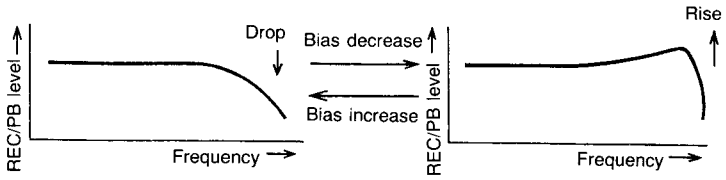
2. Insulating resistance measurement

Connect the insulating-resistance tester between the plug of power supply cord and chassis.
Specifications; 500V more than 10MΩ

HX PRO CIRCUIT OPERATION EXPLANATION

1. Regarding recording frequency characteristic and bias

Ordinarily, if the recording bias current is increased, REC/PB frequency response level in the high frequency region (about 10KHz and above) drops, and if the bias is decreased, the response rises.



2. Regarding the basic operation of HX PRO (Refer to Fig. 1)

The HX PRO uses the μ PC1297CA IC. The operation is in accordance with the following.

1) At (a), the recording bias is added onto the audio signal, and the recording signal is detected. This is the same as the recording head recording the signal on the tape.
2) The signal of 1) preserves the frequency response with the integrated circuit of (b).

$$\text{Frequency} = \frac{R450 + R448}{2\pi \times C426 \times R450 \times R448} \quad (2.1)$$

By means of the frequency of Fig. 1, the frequency which is effective from the beginning is determined. In the ordinary situation, this is half the audio band (10KHz), (10KHz ~ 7.5KHz).

3) At (c), in order to use the affected waveform after-ward, absolute detection is carried out.
4) At (d), the waveform peak value is detected. The output becomes the peak DC voltage.
5) At (e), the standard voltage and the voltage of (4) are compared.
6) With the output of (e), the frequency generation level is controlled (voltage controlled amplifier). That is, the bias size is varied.
7) Summing up 1) ~ 6):
   At (a), the time constant (frequency) that is detected in the recording signal is preserved, and above a certain frequency and above a certain level, the VCA controls the bias current by causeing its reduction. When this is done, in the maner shown in the explanation of Item I above, the frequency high region is raised. With this control, the audio signal is instantaneously dealt with.

3. Regarding the operating conditions of the HX PRO

1) With equation (2. 1) noted above, the effect begins at the frequency thus determined.
2) Above a certain level the effect begins.
   (Substantially 0 dB: In the vicinity of 500mV line out)
   The audio signal component level is dependent upon the waveform after point (c).

HX PRO BLOCK DIAGRAM

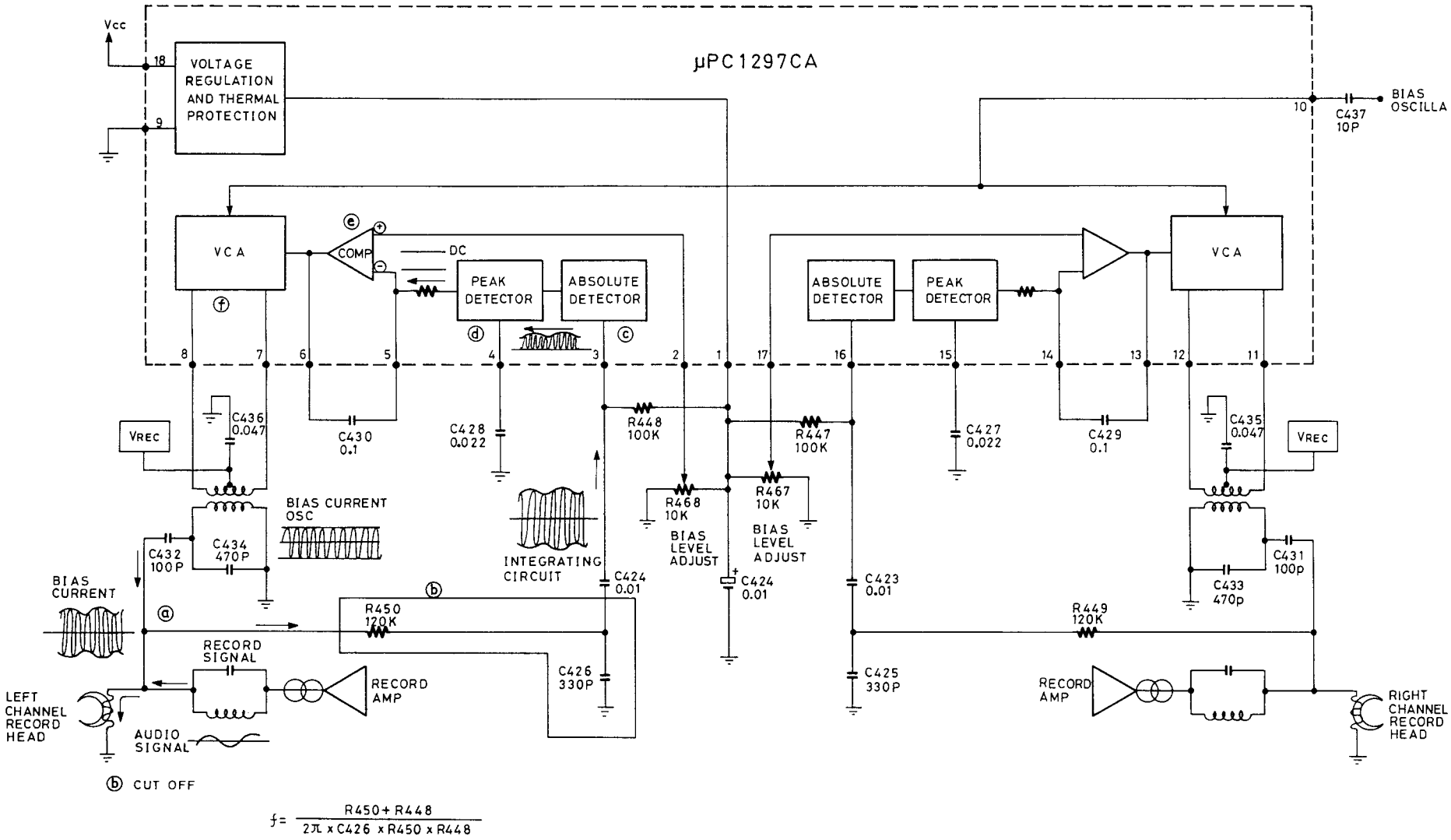
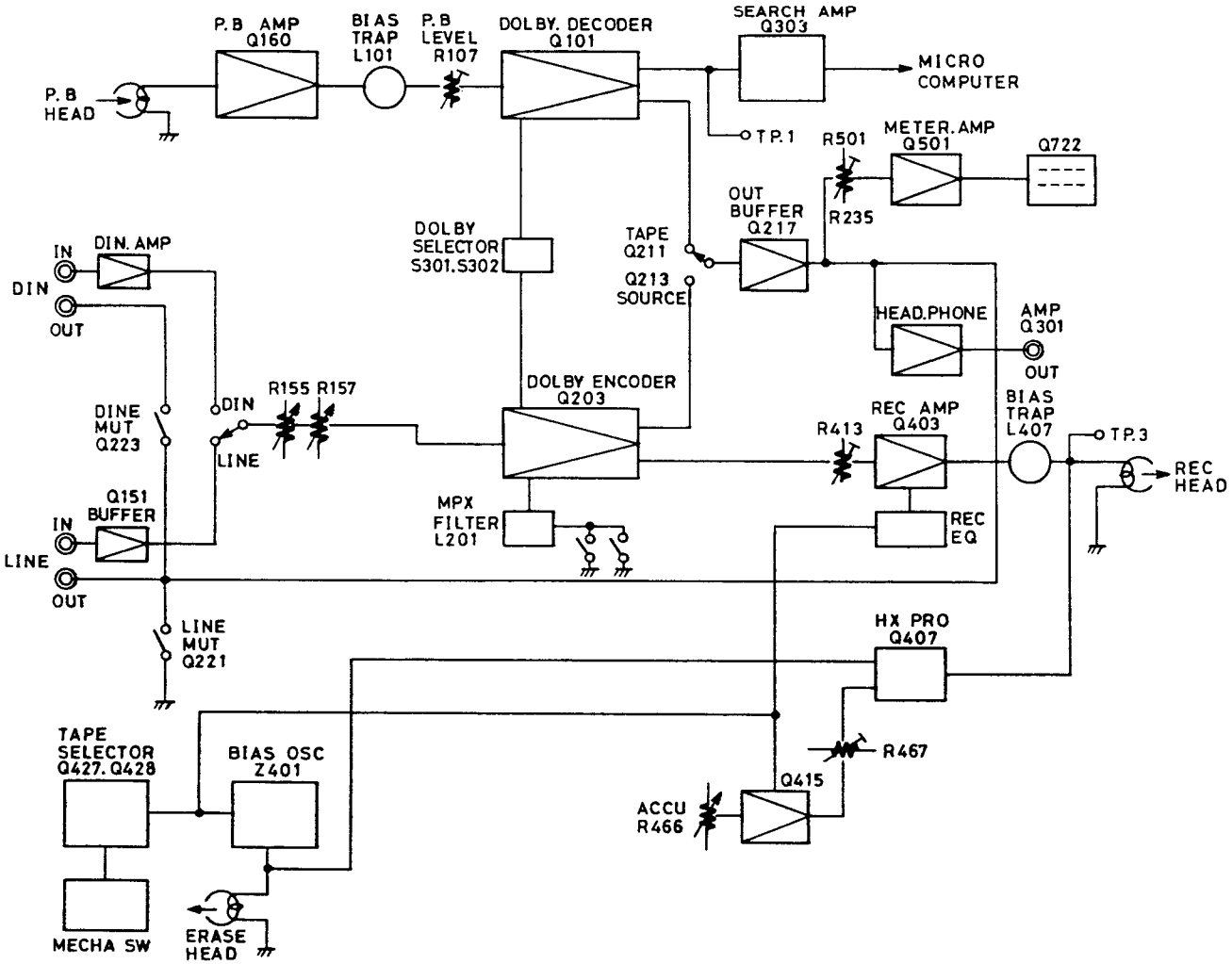
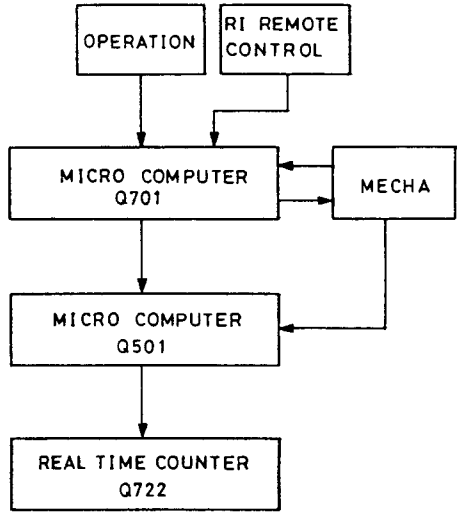
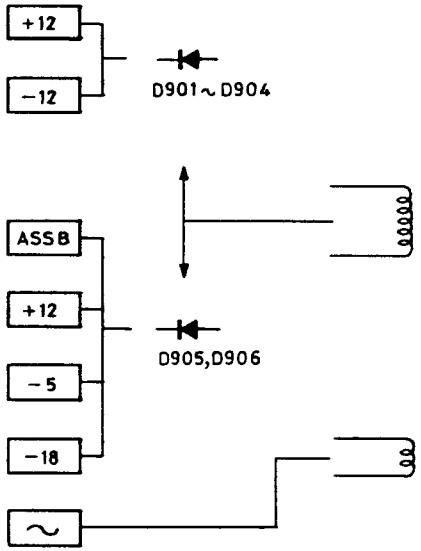


Fig. 1

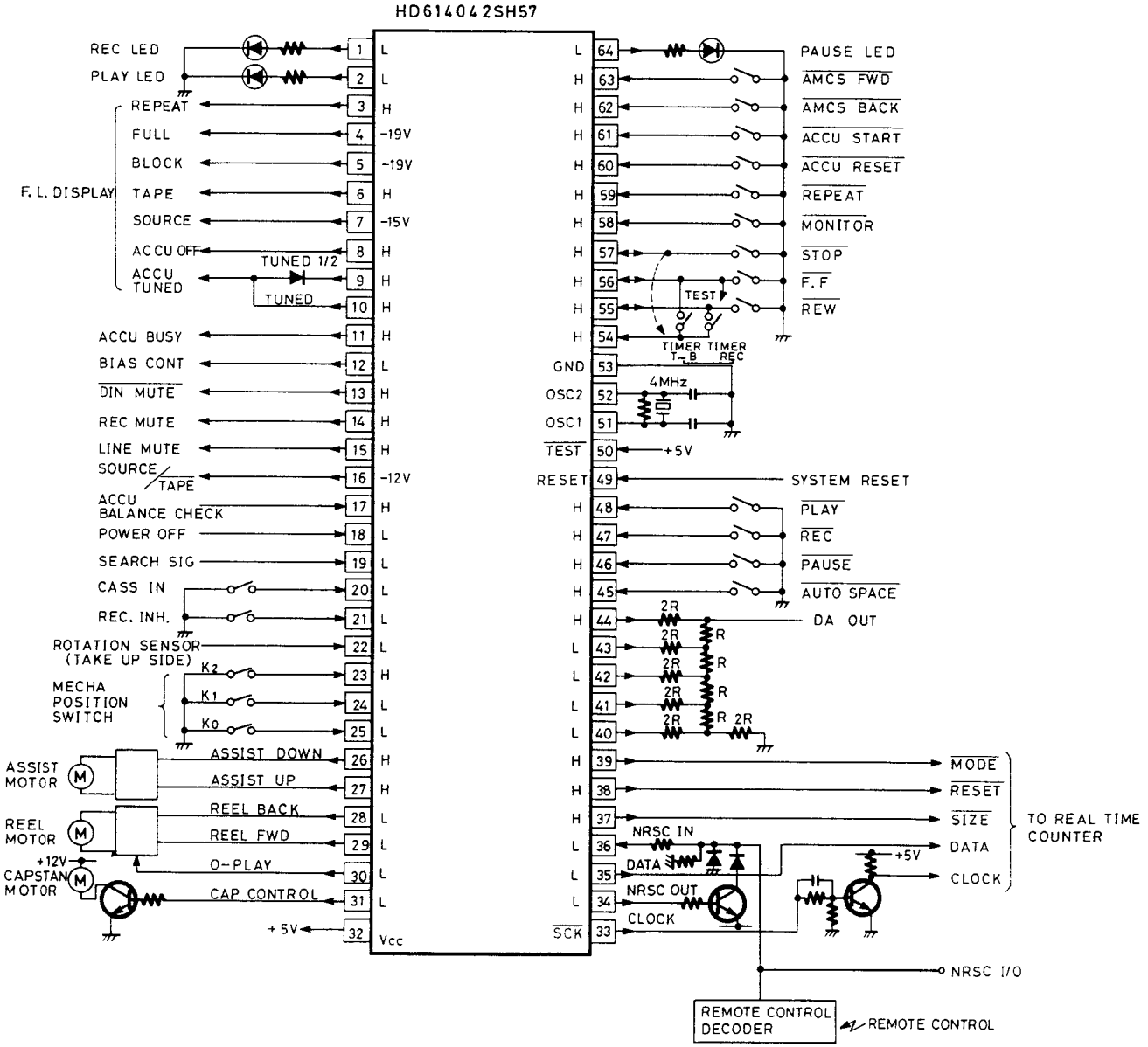
BLOCK DIAGRAM







MICRO COMPUTER (HD614042SH57)

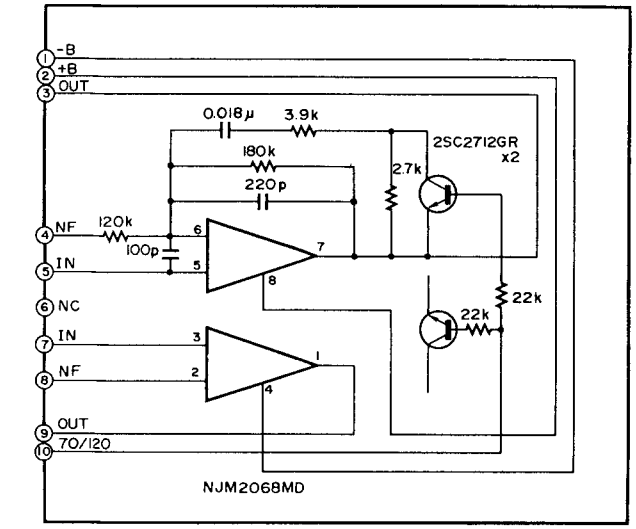


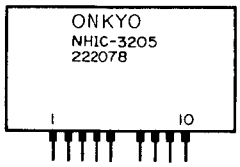
MECHANICAL POSITION CODE

Q701 # 23 #24 #25	Mode
L H L	PLAY
L L H	PLAY → PAUSE
H L H	STOP
H H L	FF, REW

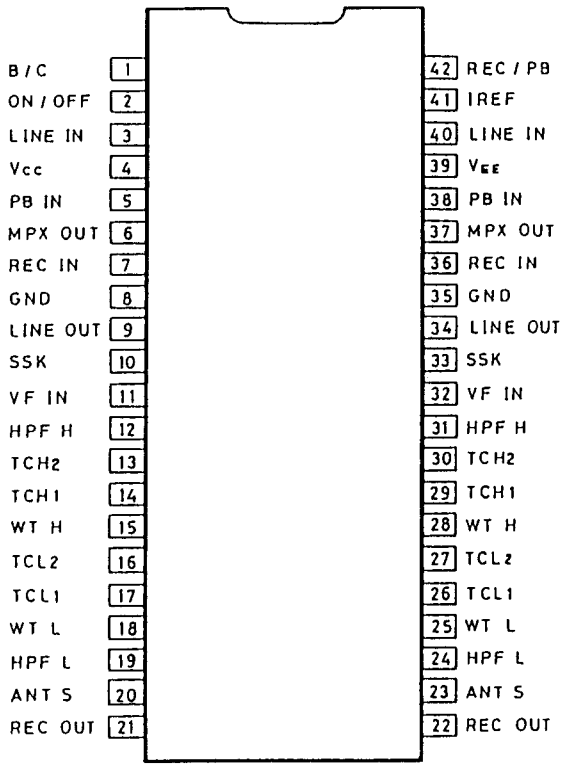
IC BLOCK DIAGRAM

NCHC-3205 (P.B. AMP)

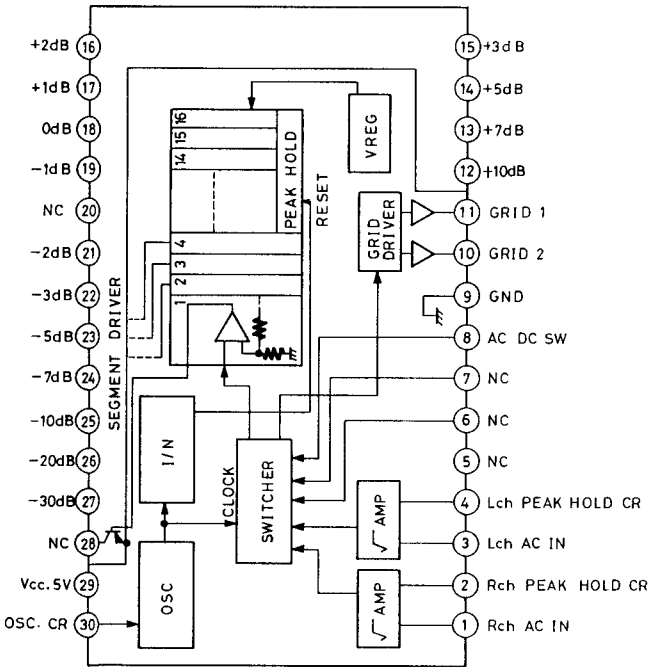




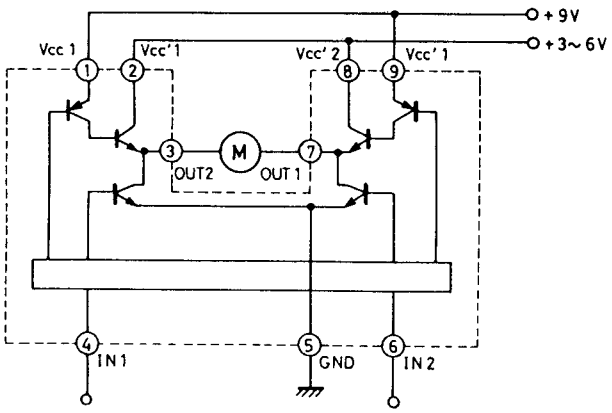
CX20187 (DOLBY N.R)



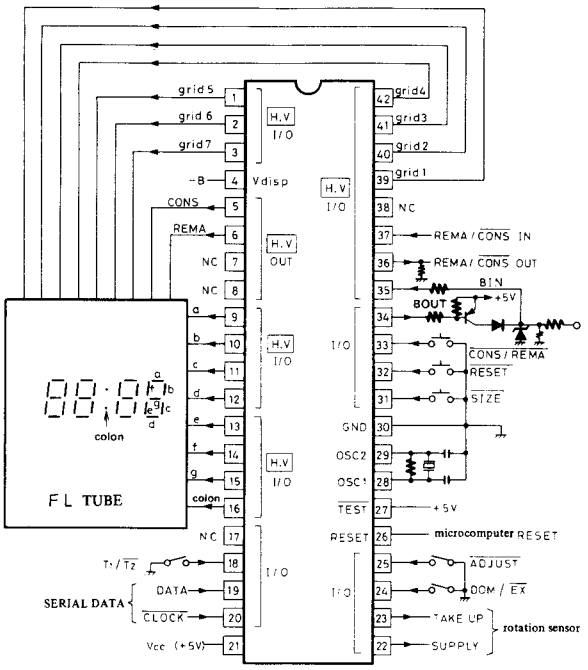
BA6800AS (METER DRIVE)



M54544AL (MOTOR DRIVE)



HD614128SA41 (COUNTER)



Terminal Name and Function

Pin No.	Name	Function
1 ~ 3	Grid 5 ~ 7	FL tube grid (DIGIT) drive use output
4	V_{disp}	Input (FL tube use) for minus bias voltage to pin Nos. 1 ~ 3, 5, 6, 9 ~ 16, 39 ~ 42
5	CONS	FL tube [CONS] display use output (time lapse)
6	REMA	FL tube [REMA] display use output (time remaining)
9 ~ 15	a ~ g	FL tube segment drive use output
16	Colon	FL tube ":" drive use output
18	$T_1/\overline{T_2}$	Microcomputer $T_1/\overline{T_2}$ function selection input (With T_2, system I/O receiving)
19	DATA	Deck mechanism status input (8 bit serial data) from mechanism control microcomputer
20	$\overline{CLOCK}$	Clock input for reading above DATA (DATA taken on pulse wave dropping)
21	Vcc	Microcomputer power source (+5V)
22	SUPPLY	Cassette mechanism tape feed side turning pulse input
23	TAKE UP	Cassette mechanism tape windup side turning (pulse input)
24	DOM/$\overline{EX}$	Domestic/export setting use selector input (Tape size type selector use) Domestic: With power ON C46 → C54 → C60 → C80 → C90 → C120
25	$\overline{ADJUST}$	Remaining time calculation buffer compensating value input (normally open, compensating ground)
26	RESET	Microcomputer system reset
27	$\overline{TEST}$	Microcomputer internal test use port, normally connected to Vcc
28, 29	OSC1, OSC2	Microcomputer clock oscillator terminal
30	GND	Microcomputer power source (GND)
31	$\overline{SIZE}$	Tape size selector input
32	$\overline{RESET}$	Lapsed time reset input (When [CONS] displays, digits are □ : □ □)
33	$\overline{CONS/REMA}$	Lapsed time ← → remaining time selector input (toggle display)
34	$\overline{BOUT}$	System bus output
35	BIN	System bus input
36	REMA/$\overline{CONS}$ OUT	Remaining time display/lapsed time display status output (when $\overline{T_2}$)
37	REMA/$\overline{CONS}$ IN	Remaining time display/lapsed time display status input (when $\overline{T_2}$)
39 ~ 42	Grid 1 ~ 4	FL tube grid (DIGIT) drive use output

ADJUSTMENT PROCEDURES

PRECAUTIONS

1. Before adjustment, clean the following parts with an alchol moinstend swab.
   * record/playback head
   * erase head
   * pinch roller
   * capstan
2. Do not use magnetized screwdriver for adjustments.
3. Demagnetize record/playback head with a head demagnetizer.

TEST EQUIPMENT/TOOLS REQUIRED:

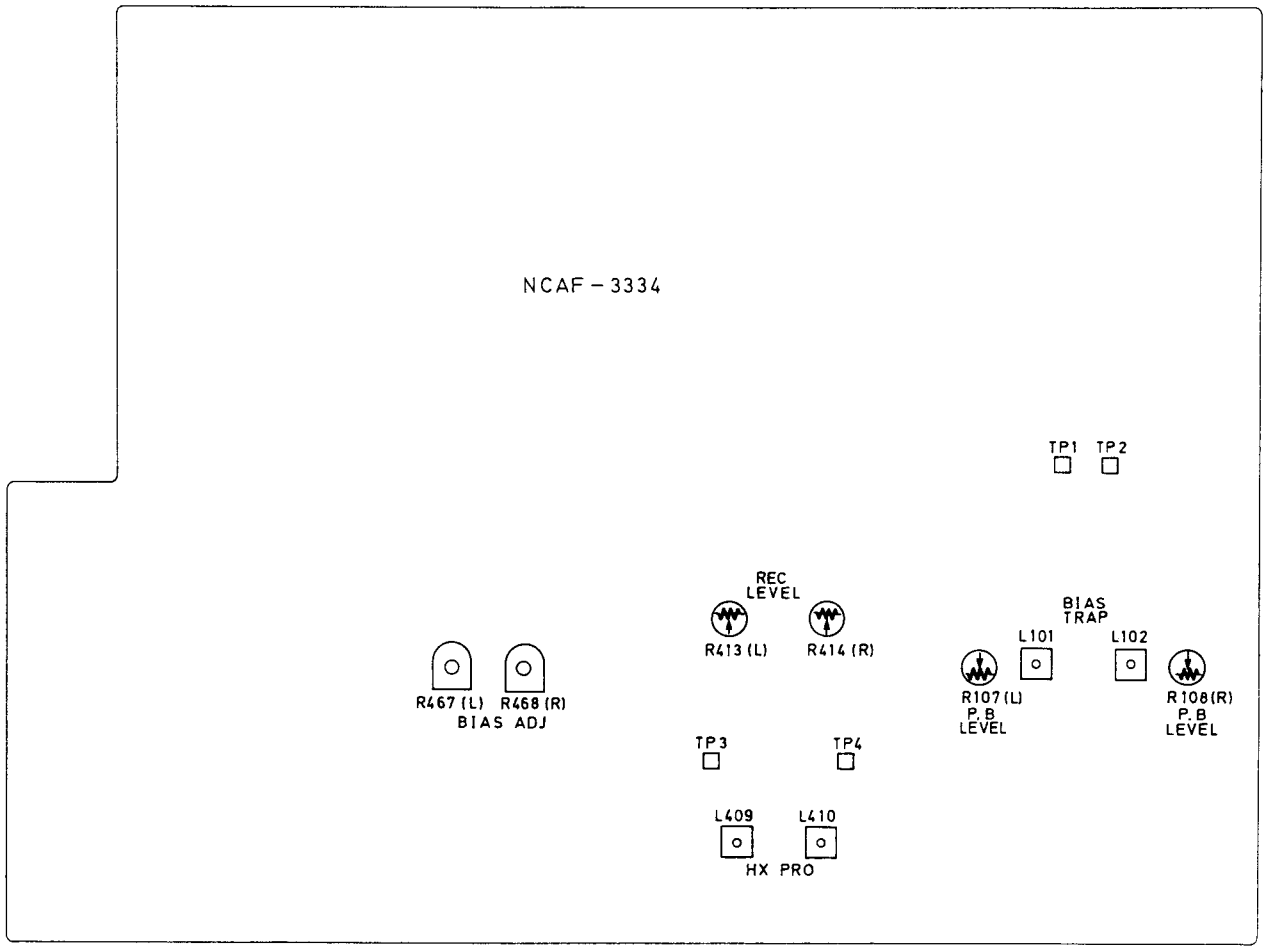
Audio oscillator
Digital frequency counter
Oscilloscope
Attenuator
AC voltmeter
Non-magnetic screw driver
Test tapes
VTT-658 : 10 KHz, −15dB
MTT-111 : 3 kHz, −10dB
MTT-150 : Dolby level calibration 400Hz, tone 200nWb/m

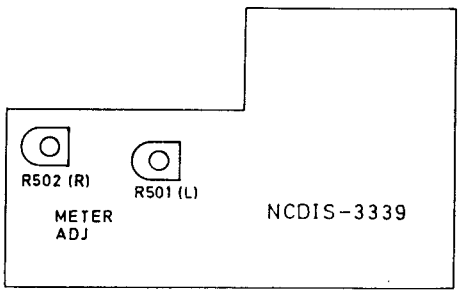
	Item	Connection of instrument	Line input	Test tape	Mode	Output indicator	Adjustment point	Adjust	Remarks
1	Tape Speed	Frequency counter to LINE output terminal		MTT-111	PB	Frequency counter	Semi-fixed on the motor	3,005 to 3,010Hz	
2	Head azimuth	AC voltmeter and oscilloscope to LINE output terminal		VTT-658	PB	AC voltmeter	Head azimuth screw	Maximum and same phase at channels L and R	Fig-1
3	Playback level	AC voltmeter to terminals TP-1 and TP-2		MTT-150	PB	AC voltmeter	R-107 (Ch.L) R-108 (Ch.R)	245mV	
4	Meter			MTT-150	PB	Level meter	R-501 (Ch.L) R-502 (Ch.R)	0dB	NADIS-3339
5	Bias trap	AC voltmeter to terminals TP-1 and TP-2		METAL TAPE	REC	AC voltmeter	L-101 (Ch.L) L-102 (Ch.R)	Minimum	
6	HX-PRO	AC voltmeter to terminals TP-3 and TP-4		METAL TAPE	REC	AC voltmeter	L-409 (Ch.L) L-410 (Ch.R)	Maximum	R-467 R-468 counter clock wise
7	Bias current	AC voltmeter to LINE output terminal	1kHz, −20dB and 12kHz, −20dB	NEW XL-II90	REC/PB	AC voltmeter	R-467 (Ch.L) R-468 (Ch.R)	Same level at REC/PB	Input VR maximum
8	Record level	Fig-2	1kHz		REC	AC voltmeter	Attenutor or AF OSC output	350mV	Input VR maximum
					REC/PB	AC voltmeter	R-413 (Ch.L) R-414 (Ch.R)	Same level at REC/PB	

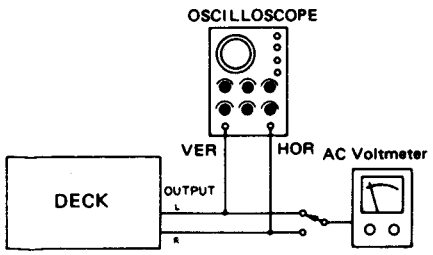
Blank tape

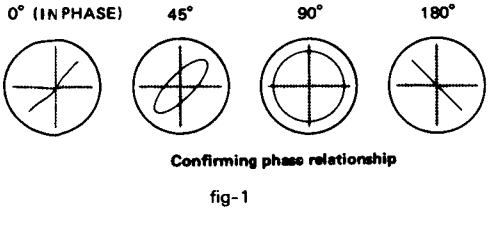
NORMAL ..... UD-I C-90
HIGH ..... XL-II C-90
METAL ..... MX C-90

PLAY torque ..... 30 – 60g/cm
FF.REW torque ..... 70 – 140g/cm
Back tension ..... 2 – 5g/cm









Confirming phase relationship

fig-1

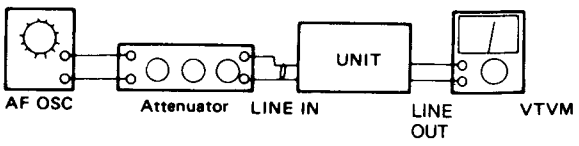
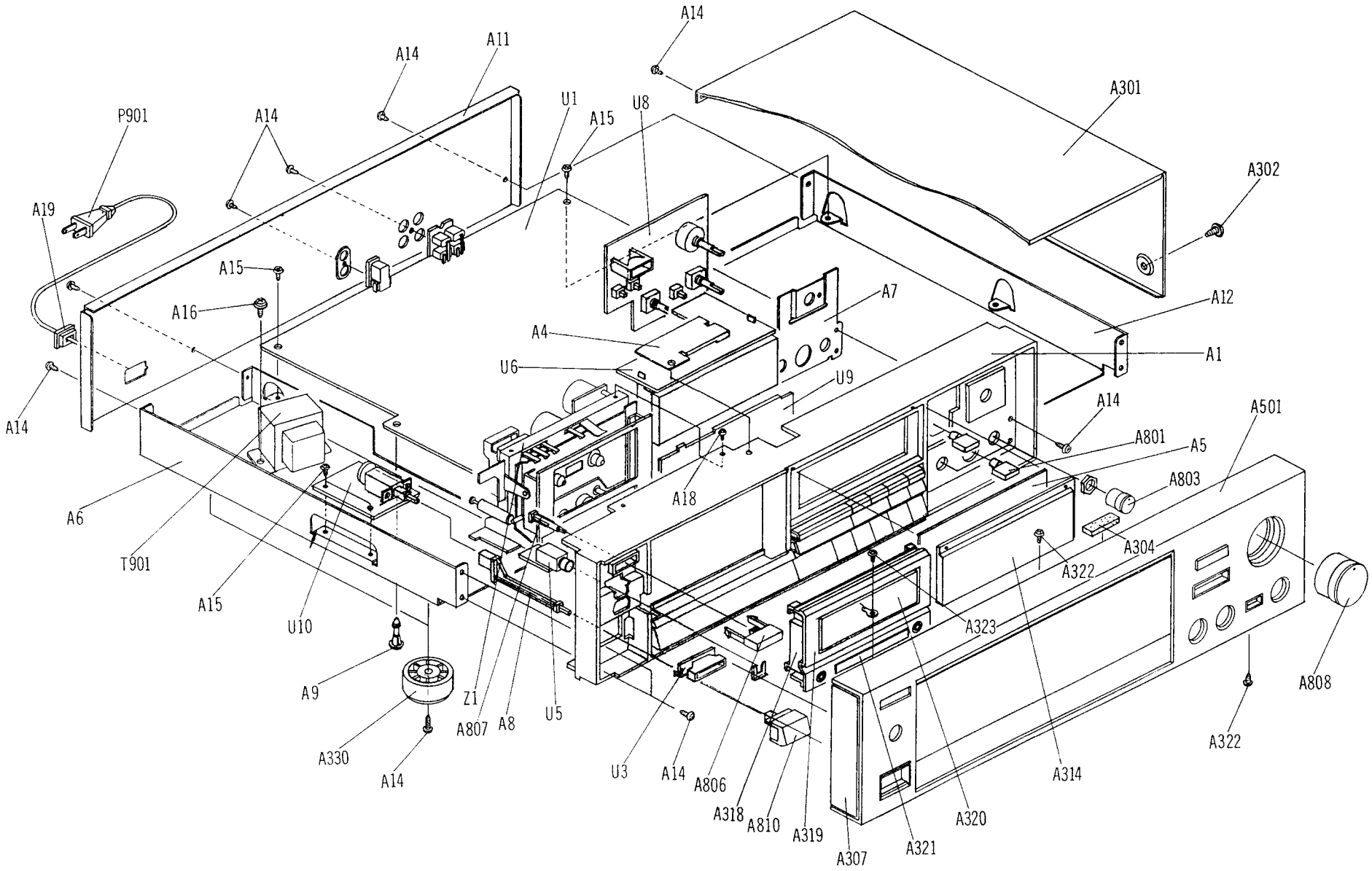


fig-2

CHASSIS-EXPLODED VIEW



CHASSIS-EXPLODED VIEW PARTS LIST

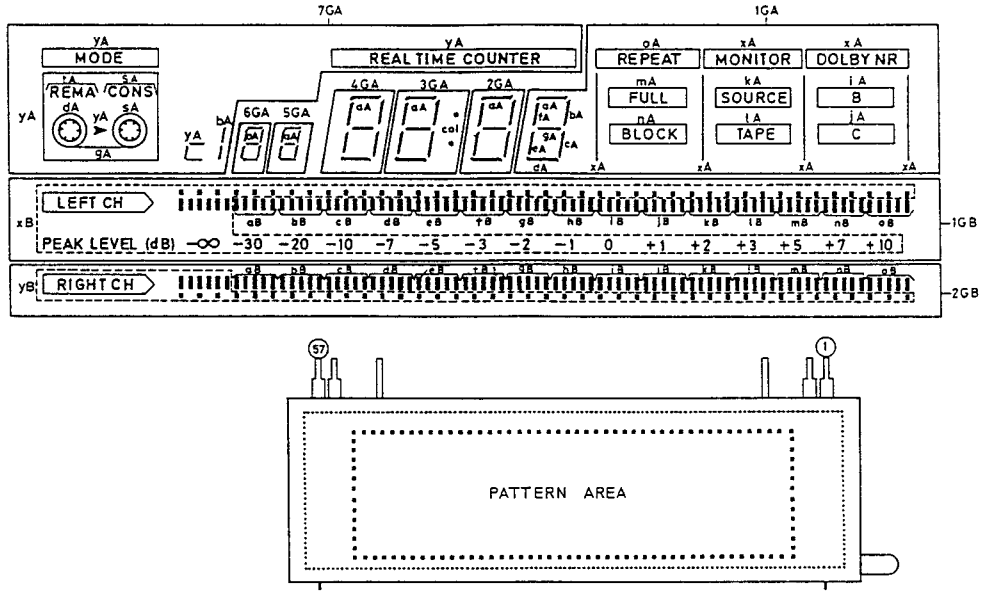
REF.NO.	PART NO.	DESCRIPTION
A1	27110419B	FRONT BRACKET AS (S)
	27110420A	FRONT BRACKET AS (B)
A4	27141273	BRACKET (PC)
A5	28133200	BACK PLATE
A6	27130536A	BRACKET (PT)
A7	27130537A	BRACKET (VOL)
A8	27273069A	JOINT (POW)
A9	27190524	HOLDER
A11	27121120	BACK PANEL
A12	27100164B	CHASSIS
A14	834430088	TAP-TIGHT SCREW 3TTS+8BBC
A15	831130088	TAP-TIGHT SCREW 3TTW+8B
A16	830440109	TAP-TIGHT SCREW 4TTC+10CB
A18	838426088	TAP-TIGHT SCREW 2.6TTB+8B
A19	27300750	BUSHING (CORD)
A20	28140877	CUSHION
A21	28140881	CUSHION
A22	27270214A	SPACER
A301	28184395	TOP COVER (S)
	28184397	TOP COVER (B)
A302	838440089	TAP-TIGHT SCREW 4TTB+8CBC
A304	28140408	CUSHION
A307	28125194	END CAP (L) (S)
	28125194-1	END CAP (L) (B)
A308	28125195	END CAP (R) (S)
	28125195-1	END CAP (R) (B)
A309	27267551A	GUIDE (VOL) (S)
	27267553A	GUIDE (VOL) (B)
A310	28194296	COSMETIC BAR (S)
	28194297	COSMETIC BAR (B)
A311	27267481B	GUIDE (POW) (B)
	27267498B	GUIDE (POW) (S)
A312	28198670	FACET (POW)
A314	28191469	CLEAR PLATE
A316	28191472	CLEAR PLATE (RE)
A318	27301119A	CASSETTE LID (S)
	27301123A	CASSETTE LID (B)
A319	27301120	CASSETTE LID (AL) (S)
	27301122	CASSETTE LID (AL) (B)
A320	28400400	WINDOW (S)
	28400413	WINDOW (B)
A321	28135152	BADGE (S)
	28135153	BADGE (B)
A322	833430080	TAP-TIGHT SCREW 3TTP+8PBC
A323	834230108	TAP-TIGHT SCREW 3TTS+10BNi

REF.NO.	PART NO.	DESCRIPTION
A330	27175153	LEG
A501	1N042121	FRONT PANEL (S)
	1N043121	FRONT PANEL (B)
A801	28323377A	KNOB (PUSH) (S)
	28323388A	KNOB (PUSH) (B)
A803	28323378	KNOB (BAL) (S)
	28323389	KNOB (BAL) (B)
A806	28323282	KNOB (EJECT) (S)
	28323287	KNOB (EJECT) (B)
A807	27260279	SHAFT (EJ)
A808	28323379	KNOB (LEV) (S)
	28323395	KNOB (LEV) (B)
A810	28323175	KNOB (POW) (B)
	28323380	KNOB (POW) (S)
⚠ P901	253149	AC CORD AS-CEE
⚠ T901	2300336	NPT-1003G
U1	1N040534-1A	NAAF-3334-1A
U3	1N040536-1	NADIS-3336-1
U4	1N040537-1	NASW-3337-1
U5	1N040538-1	NAETC-3338-1
U6	1N040539-1	NADIS-3339-1
U7	1N040540-1	NAAF-3340-1
U8	1N040541-1	NAAF-3341-1
U9	1N040542-1	NASW-3342-1
U10	1N040543-1	NASW-3343-1
Z1	244114	CASSETTE DECK MECHANISM

NOTE: (S): Silver Model
(B): Black Model

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

BG-555G (DISPLAY TUBE)

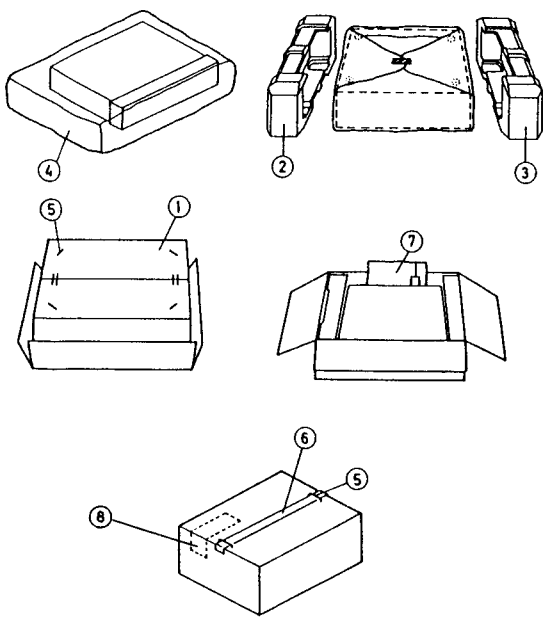


PIN CONNECTION

PIN NO.	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	n B	o B	y B	x B	2G B	1G B	N P	N P	t A	s A	y A	7G A	6G A	5G A	4G A	3G A	2G A	h A	g A	f A	e A	d A	c A	b A	a A	1G A	x A	r A	q A	p A	o A	n A	m A	l A	k A	j A	i A	N P	F 1	F 1

PIN NO.	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
CONNECTION	F 2	F 2	N P	N P	a B	b B	c B	d B	e B	f B	g B	h B	i B	j B	k B	l B	m B

PACKING VIEW



REF NO.	PART NO.	DESCRIPTION
1	29051715	Master carton box (S)
	29051714	Master carton box (B)
2	29091264A	Pad (L)
3	29091265A	Pad (R)
4	29100105	620 × 550 Poly bag
5	282301	Sealing hook
6	260012	Damplon tape
7	Accessary bag ass'y	
	29341282	Instruction manual
	2010098A	Connection cable
	29100006A	350 × 250 Poly bag
8	29365020	Waranty card
	29100094A	Poly bag

NOTE: (S): Silver Model
(B): Black Model

PC BOARD PARTS LIST

NAAF-3334-1A

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101	222999	CX-20187
Q151	222502	NJM-4558DX
Q160	222078	NHIC-3205
Q203	222999	CX-20187
Q215	222502	NJM-4558DX
Q301	22240111 or	BA15218 or
	222808	M5218P
Q303	222940	BA335H
Q401	222502	NJM-4558DX
Q403	22240111 or	BA15218 or
	222808	M5218P
Q407	222959	μPC1297CA
Q415	222921 or	BA4558 or
	222465	NJM-4558D
Q701	22240169	HD614042SH57
Q706, Q709	222953	M-54544AL
Q901, Q902	222780125MIT	78M12
Q906	222780055MIT	78M05
	Transistors	
Q103	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q104	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q153, Q154	2211406 or	2SC2240-BL or
	2211896	2SC1815LL
Q155, Q156	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q205-Q209	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q210	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q211-Q214	2212304 or	2SK381-D or
	2211945	2SK246-GR
Q219, Q220	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q221, Q222	2211706	2SD655-F
Q223, Q224	2212304 or	2SK381-D or
	2211945	2SK246-GR
Q225, Q226	221281	DTC114YS
Q227	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q405, Q406	2212794 or	2SD1468-R or
	2212795	2SD1468-S
Q422	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q423, Q424	221282	DTC144ES
Q425	2201540	2SD947
Q426-Q428	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q429, Q430	221282	DTC144ES
Q703	2213090	DTA114YS
Q704	221281	DTC114YS
Q705	2201385	2SD330-E
Q707	221281	DTC114YS
Q708	2201540	2SD947
Q710	2201540	2SD947
Q711	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q712	2213090	DTA114YS
Q713	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q714	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q715	221282	DTC144ES
Q716	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
Q717	221282	DTC144ES
Q903	2211455 or	2SA1015-GR or
	2212495	JA101Q
Q904	2201924 or	2SD1761-E or
	2201385	2SD330-E
Q905	2211255 or	2SC1815-GR or
	2210746	2SC945-AP
	Diodes	
D101, D102	224450822,	MTZ8.2B,
	224150822 or	05AZ8.2Y or
	224650822	HZ8.2EB2
D151-D154	223163	1SS133
D201, D202	224450822,	MTZ8.2B,
	224150822 or	05AZ8.2Y or
	224650822	HZ8.2EB2
D205, D206	223163	1SS133
D207-D211	223163	1SS133
D401	223163	1SS133
D406-D411	223163	1SS133
D702	224451003,	MTZ10C,
	224151003 or	05AZ10Z or
	224651003	HZ10EB3
D703	224450562,	MTZ5.6B,
	224150562 or	05AZ5.6Y or
	224650562	HZ-5.6E-B2
D704, D705	223163	1SS133
D901-D906	22380006 or	1N4003 or
	223894	1N4002F
D907	224452001,	MTZ20A,
	224152001 or	05AZ20X or
	224652001	HZ20EB1
D908	224450511,	MTZ5.1A,
	224150511 or	05AZ5.1X or
	224650511	HZ5.1EB1
D909	22380006 or	1N4003 or
	223894	1N4002F
D910	224451501,	MTZ15C,
	224151501 or	05AZ15X or
	224651501	HZ15EB1
D911, D912	223163	1SS133
	Coils	
L101, L102	231147	NCH-4199
L103, L104	233382	NMC-2069
L201, L202	233328	NMC-6051
L203, L204	233382	NMC-2069
L407, L408	231101	NCH-2148
L409, L410	231100	NCH-4147
L411, L412	231077	NCH-2125
	OSC Block	
Z401	24606198	NOB-029
	Ceramic OSC	
X701	3010099 or	CSA-4.00MG or
	3010128	PRS-4.00RM11
	Capacitors	
C103, C104	354722219	220μF6.3V, ELECT.
C105, C106	354741009	10μF16V, ELECT.
C107, C108	354741009	10μF16V, ELECT.
C115, C116	354744719	470μF16V, ELECT.
C139, C140	354741009	10μF16V, ELECT.
C141, C142	354741019	100μF16V, ELECT.
C143, C144	354742219	220μF16V, ELECT.
C147	354742209	22μF16V, ELECT.

CIRCUIT NO.	PART NO.	DESCRIPTION
C151, C152	392880107	1μF50V, LL.
C153, C154	392880107	1μF50V, LL.
C155, C156	354782299	0.22μF50V, ELECT.
C157, C158	354741019	100μF16V, ELECT.
C201, C202	354780479	4.7μF50V, ELECT.
C203, C204	352950476	4.7μF25V, NP.
C231, C232	354741009	10μF16V, ELECT.
C233, C234	354741019	100μF16V, ELECT.
C235, C236	354742219	220μF16V, ELECT.
C237	354780479	4.7μF50V, ELECT.
C243, C244	354741009	10μF16V, ELECT.
C245	354780479	4.7μF50V, ELECT.
C246	354744709	47μF16V, ELECT.
C247, C248	354780479	4.7μF50V, ELECT.
C249	354741009	10μF16V, ELECT.
C301, C302	354741009	10μF16V, ELECT.
C303	354780229	2.2μF50V, ELECT.
C305	354781099	0.1μF50V, ELECT.
C306	354784799	0.47μF50V, ELECT.
C327	354780479	4.7μF50V, ELECT.
C328	354741009	10μF16V, ELECT.
C401, C402	354741009	10μF16V, ELECT.
C403, C404	354780479	4.7μF50V, ELECT.
C405, C406	354782299	0.22μF50V, ELECT.
C407, C408	354780479	4.7μF50V, ELECT.
C431, C432	370131014S	100PF 100V, APS
C433, C434	370134714S	470PF 100V, APS
C438, C439	354741009	10μF16V, ELECT.
C440, C441	354722219S	220μF6.3V, ELECT.
C442-C444	354780479	4.7μF50V, ELECT.
C708	354780229	2.2μF50V, ELECT.
C716	354741009	10μF16V, ELECT.
C902, C903	354752229S	2200μF25V, ELECT.
C904, C905	354784799	0.47μF50V, ELECT.
C906, C907	354780479	4.7μF50V, ELECT.
C908	354751029S	1000μF25V, ELECT.
C909	354741019	100μF16V, ELECT.
C910	354744709	47μF16V, ELECT.
C911	3504168	13000μF25V, ELECT.
C912, C913	354784799	0.47μF50V, ELECT.
C914	354780479	4.7μF50V, ELECT.
	Resistors	
R107, R108	5210062	N06HR 4.7KBD
R413, R414	5210062	N06HR 4.7KBD
R467, R468	5215045 or	N08HR 10KBC or
	5215021	N08HR 10KBC
R473	442525604	RS1/2WBJ 56Ω
R476	442525604	RS1/2WBJ 56Ω
R704	49163104407	100kΩ×7, 1/10W, NETWORK
R707	49163392405	3.9kΩ×5, 1/10W, NETWORK
R710	441722704	RS 2 WBJ 27Ω
R737	49163392407	3.9kΩ×7, 1/10W, NETWORK
R738	49163392409	3.9kΩ×9, 1/10W, NETWORK
R903-R904	442522294	RS1/2WBJ 0.22Ω
R905	442520224	RS1/2WBJ 2.2Ω
R908	441724704	RS 2 WBJ 47Ω
R909	442520104	RS1/2WBJ 1.0Ω
	Plugs	
P101	25055134	NPLG-4P118
P103	25045208	NPJ-4PDBL88
P105	25050064	NSCT-5P18, DIN SOCKET
P107, P108	25055147	NPLG-3P131
P303A	2000878	NSAS-6P834, SOCKET
P307	25055186	NPLG-5P170
P401	25055184	NPLG-3P168
P405	25055134	NPLG-4P118
P407	25055132	NPLG-2P116
P501L, P502R	25055146	NPLG-2P130
P701	25055187	NPLG-6P171
P702	25055188	NPLG-7P172
P704	25055185	NPLG-4P169
P705, P706	25055149	NPLG-5P133
P708	25055149	NPLG-5P133
P709A	2000873	NSAS-18P829
P710	25055140	NPLG-10P124
P712	25045172	HSJ-1003-01-020
	Miscellaneous	
	27160211-1	RAD-68B, RADIATOR
	27160227	RAD-076, RADIATOR
	27160211	RAD-68, RADIATOR
	27141283	BRACKET(HT)
	82143006	3P+6FN(BC), SCREW
	880016	NRP-335, PLASTIC RIVET

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CIRCUIT NO.	PART NO.	DESCRIPTION
D913, D914	225142	SEL2913K, LED
	27190499A	HOLDER(LED), POW

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CIRCUIT NO.	PART NO.	DESCRIPTION
S721	25030289	NRSF-123-25MP

NAETC-3338-1

CIRCUIT NO.	PART NO.	DESCRIPTION
P301	25045139	HLJ0504-01-010

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CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q501	22240170	BA6800AS
Q720	22240084	HD614128SA41
	Display tube	
Q722	212056	BG-555G
	Transistor	
Q503, Q504	2213090	DTA114YS
Q723, Q724	2211255 or	2SC1815GR or
	2210746	2SC945A-P
	Ceramic OSC	
X702	3010118 or	CSA3.00MG or
	3010129	PRS-3.00RM03
	Capacitor	
C501, C502	354741009	10μF16V, ELECT
C503, C504	354742209	22μF16V, ELECT
C720	354741009	10μF16V, ELECT
	Resistor	
R501, R502	5215020	N08HR5KBC
R509	49163104415	100k×15, 1/10W
	Socket, plug	
P501A	2000879	NSAS-8P835
P703	25055226	NPLG-4P210
P705A	2000757	NSAS-10P713
P706A	2000649	NSAS-10P605
P707	25055225	NPLG-3P209
P708A	2000874	NSAS-10P830

PC BOARD PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Bracket	
	27130539	BRACKET(FL)

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CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q409-Q414	2211255 or	2SC1815GR or
	2210746	2SC945A-P
	Coils	
L401, L402	233194 or	NCH-1039 or
	231089	NCH-2137
L403, L404	24606069 or	NCH-1007 or
	231084	NCH-2132
L405, L406	24606080 or	NCH-1022 or
	231083	NCH-2131
	Plugs	
P403	25055317	NPLG-3P300
P404	25055319	NPLG-5P302

NAAF-3341-1

CIRCUIT NO.	PART NO.	DESCRIPTION
	LED	
D311	225137CG,	SEL2413CG,
	225137DG or	SEL2413DG or
	225137DY	SEL2413DY
	Resistors	
R155	5104239	N12RGLC5KMN25Z
R157	5104241	N12RGL5KA25Z
R488	5104240	N12RGLC5KB25Z
	Switches	
S301-S303	25035514	NPS-122-L476, PUSH
	Sockets	
P107A	2000877A	NSAS-6P833
P108A	2000876A	NSAS-6P832
P307A	2000776	NSAS-10P732
P401A	2000519	NSAS-6P475
P707A	2000875	NSAS-6P831
	Holder	
	27190650	HOLDER(LED)

NASW-3342-1

CIRCUIT NO.	PART NO.	DESCRIPTION
	LEDS	
D708, D709	225141	SEL2213C
D710	225137CG,	SEL2413CG,
	225137DG or	SEL2413DG or
	225137DY	SEL2413DY
	Switches	
S701-S710	25035548	NPS-111-S510, PUSH
S712-S714	25035548	NPS-111-S510, PUSH
	Sockets	
P701A	2000603	NSAS-12P559
P702A	2000818	NSAS-14P774
P703A	2000665	NSAS-8P621
P704A	2000571	NSAS-8P527
	Holder	
	27190649A	HOLDER(LED3)

NASW-3343-1

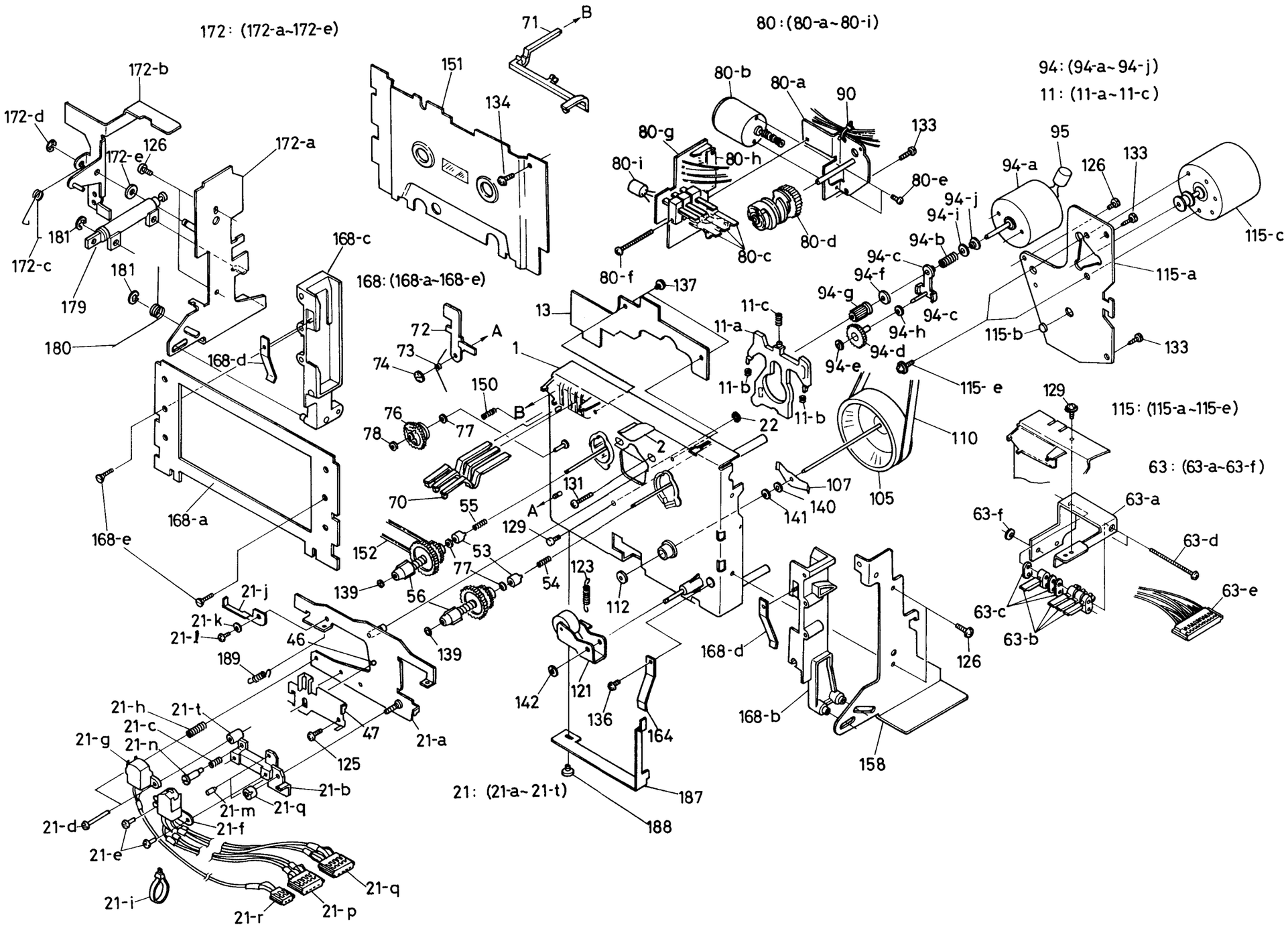
CIRCUIT NO.	PART NO.	DESCRIPTION
C901	3500065A	⚠ 0.01μ, AC400V, CAPACITOR IS.
S901	25035558	⚠ NPS-111-L520P, PUSH
	25060092	NMT-1S33, TERMINAL

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

TAPE MECHANISM PARTS LIST

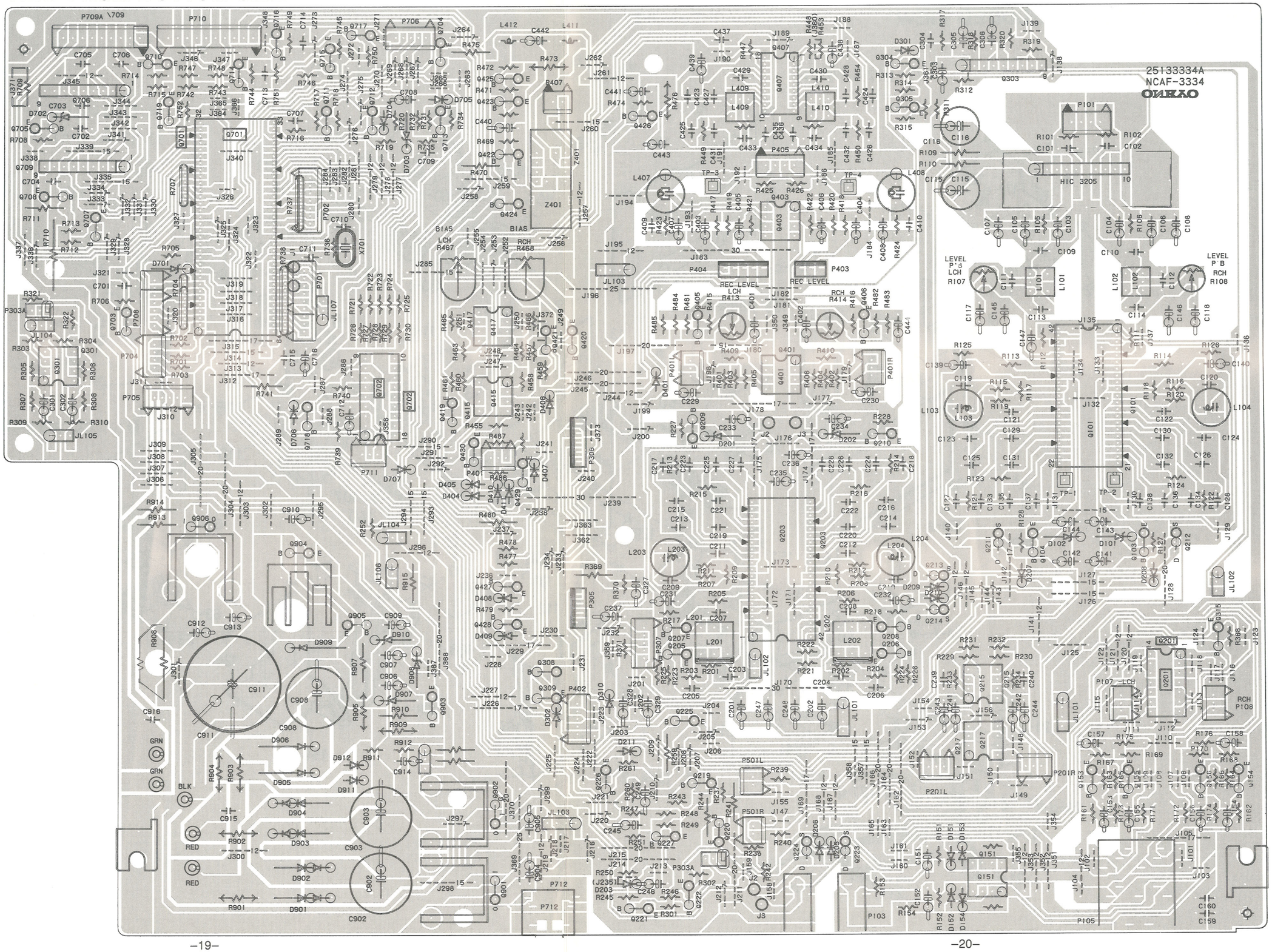
REF.NO.	PART NO.	DESCRIPTION
1	24611042-1	MECHANISM CHASSIS
2	24605468	SPRING (CASSETTE)
11	24611043	BRAKE PLATE AS
11-a	24611053	BRAKE PLATE
11-b	24610999	BRAKE RUBBER
11-c	24605500	SPRING
13	24606304	P.C.B. AS (SENSOR)
21	24611364	BASE AS (HEAD)
21-a	24611365	BASE AS (HEAD)
21-b	24611046	HEAD BLOCK
21-c	24605502	SPRING
21-d	82512012	BIND SCREW M2×12
21-e	801250	PAN-HEAD SCREW M2×4
21-f	24600037A	R/P HEAD
21-g	24600041	E HEAD
21-h	24605618	SPRING
21-i	24611052	BINDER
21-j	24611054	STOPPER
21-k	24611055	WASHER
21-l	82112002	PAN-HEAD SCREW 2P×2FN
21-m	801251	SCREW M2×4
21-n	24610652	SHAFT
21-o	24610495	ADJUSTING NUT
21-t	24604062	SPACER
22	893030	CIRCLIP E3
46	24610943	STEEL BALL ϕ3
47	24610963	PLATE (HEAD)
53	24610964	SPRING STAND
54	24605501	SPRING
55	24605505	SPRING
56	24602267	REEL AS
63	24606305	SWITCH AS
63-a	24611056	BRACKET (SWITCH)
63-b	24606205	LEAF SWITCH
63-c	24611057	WASHER
63-d	82112030	PAN HEAD SCREW M2×30
63-f	24611058	WASHER 2.9×5×0.5t
70	24603281	LEVER (SWITCH)
71	24603282	LEVER (METAL)
72	24611049	LOCK PLATE
73	24605503	SPRING
74	891030	STOP RING CS-3
76	24601167	PULLEY AS
77	24611047	WASHER 2.1×4.5×0.1t
78	24611003	WASHER 1.8×3.8×0.5t
80-a	24610968	BRACKET (MOTOR)
80-b	24601103	ASSIST MOTOR
80-c	24606182	LEAF SWITCH
80-d	24602133	CAM GEAR
80-e	82112003	PAN-HEAD SCREW M2×3
80-f	833125209	TAP-TIGHT SCREW M2.5×20
80-g	24606181	P.C.B.
90	24611052	BINDER
94	24601145A	REEL MOTOR ASS'Y
94-a	24601054	MOTOR
94-b	24605467	SPRING
94-c	24602235A	LEVER AS (GEAR)
94-d	24602236A	GEAR
94-e	24610969	WASHER 1.3×3.4×0.5t
94-f	24610970	FELT
94-g	24602237A	GEAR (MOTOR)
94-h	24610981	WASHER 1.7×6×0.25t
94-i	24610374	WASHER
94-j	24611048	SPRING STAND
105	24602372	FLYWHEEL
107	24605452	SPRING (THRUST)
110	24602269	BELT
112	24610673	WASHER
115	24601213A	BRACKET (FW)
115-a	24610971	BRACKET (FLYWHEEL)
115-b	24610671	THRUST WASHER
115-c	24601202A	CAPSTAN MOTOR AS
115-e	801338	SCREW M2.6×3.5
121	24602270	PINCH ROLLER AS
123	24605453	SPRING
125	833125069	SCREW M2.5×8
126	833125059	TAP-TIGHT SCREW M2.5×5
129	801250	PAN-HEAD SCREW M2×4
131	82512614	BIND SCREW M2.6×14
133	833426105	TAPPING SCREW M2.6×10
134	833126055	TAPPING SCREW M2.6×5
136	837120058	TAP-TIGHT SCREW M2×5
137	801292	TAP-TIGHT SCREW M2×3.2
139	24610349	WASHER 1.8×3.2×0.5t
140	24610515	WASHER 2.6×4.7×0.25t
141	24610972	WASHER 2.6×7×0.13t
142	24610973	WASHER 2.7×6×0.5t
150	24605481	SPRING
151	24611235	PANEL
152	24602271	BELT
158	24610939	SIDE BRACKET (R)
164	24605188	SPRING (CASSETTE)
168	24610940A	HOLDER AS (CASSETTE)
168-a	24610949	FRAME
168-b	24610849A	HOLDER (R)
168-c	24610848A	HOLDER (L)
168-d	24605463	SPRING
168-e	835426082	TAPPING SCREW M2.6×8
172	24611050	SIDE BRACKET AS (L)
172-a	24611059	SIDE BRACKET AS (L)
172-b	24603283	LEVER (RELEASE)
172-c	24605504	SPRING
172-d	893030	CIRCLIP E3
172-e	24610452	WASHER
179	24611051	DAMPER UNIT
180	24605456	SPRING
181	891024	STOP RING
187	24611079	BRAKE
188	833130049	PAN HEAD SCREW M3×4
189	24605704	SPRING

TAPE MECHANISM-EXPLODED VIEW

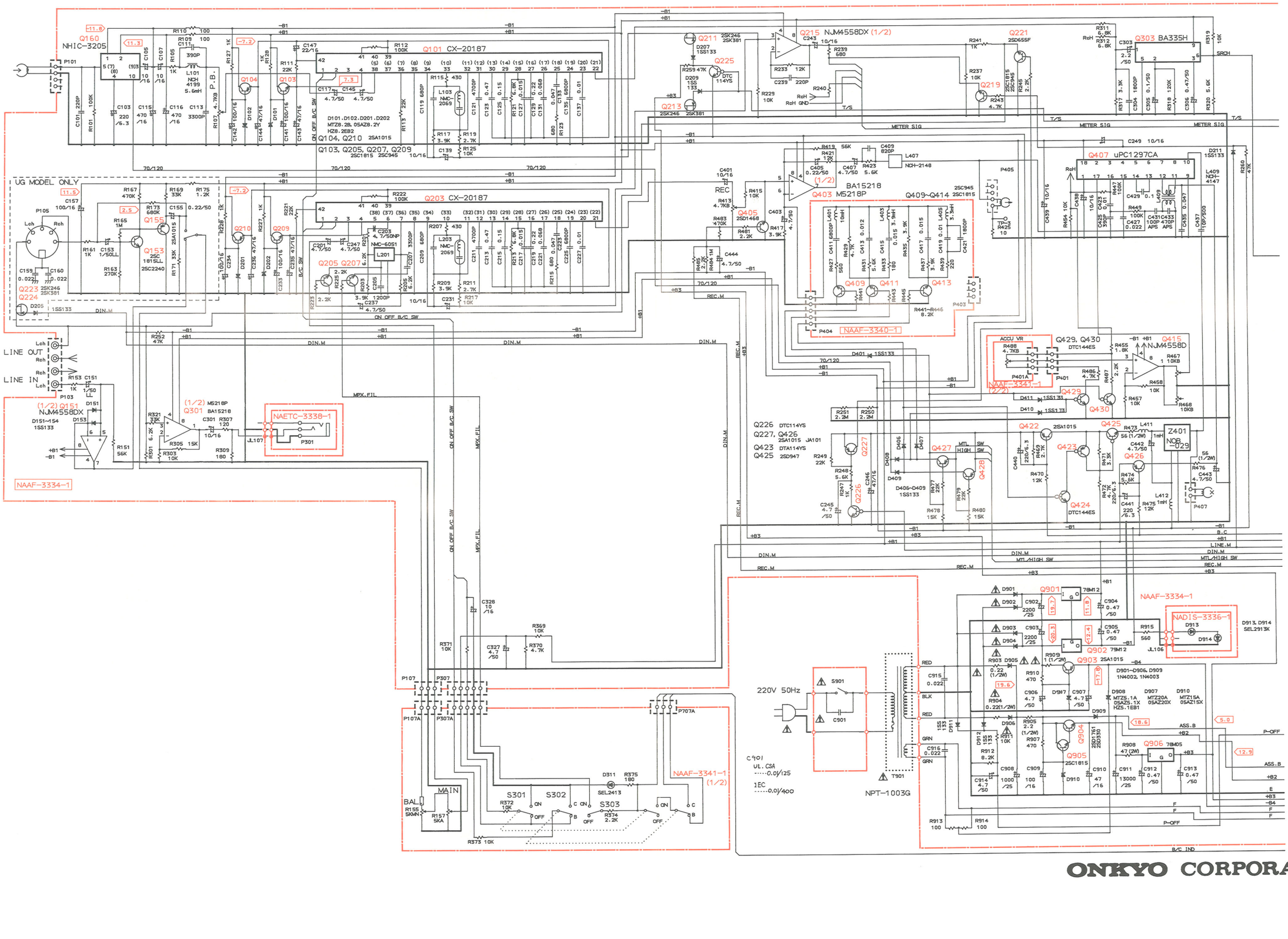


PC BOARD VIEW FROM BOTTOM SIDE

NAFF-3334-1A



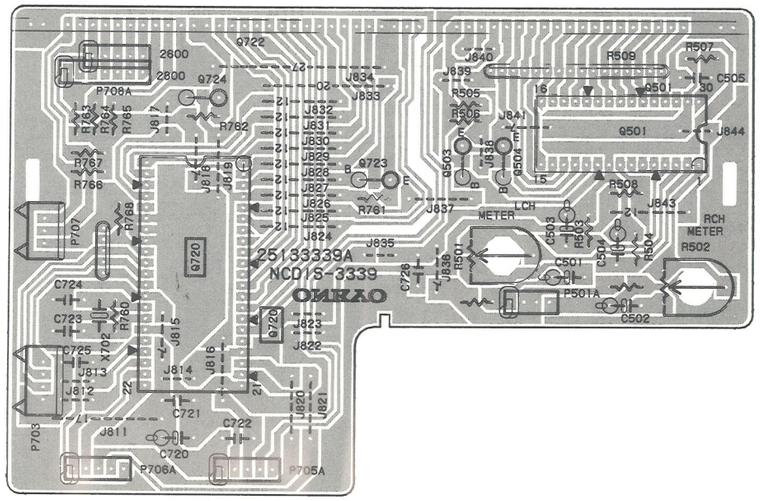
SCHEMATIC DIAGRAM (1/2)



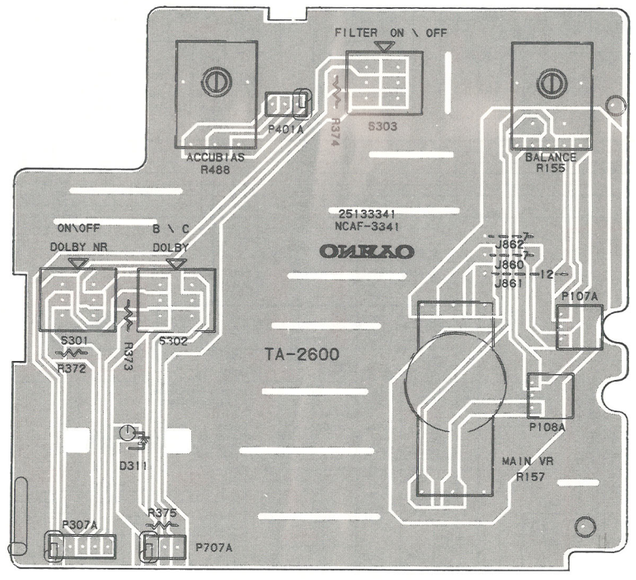
ONKYO CORPORATION

PC BOARD VIEW FROM BOTTOM SIDE

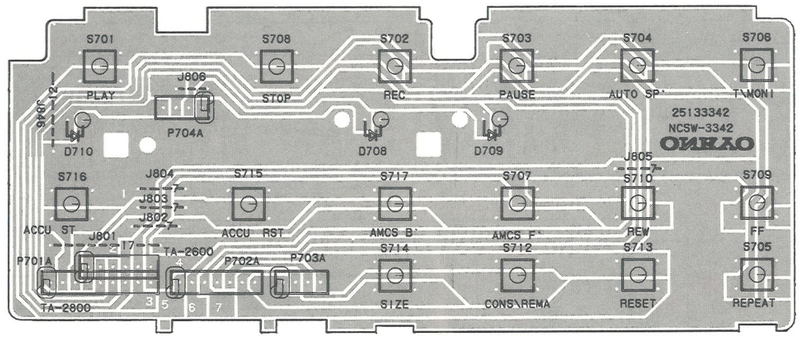
NADIS-3339-1



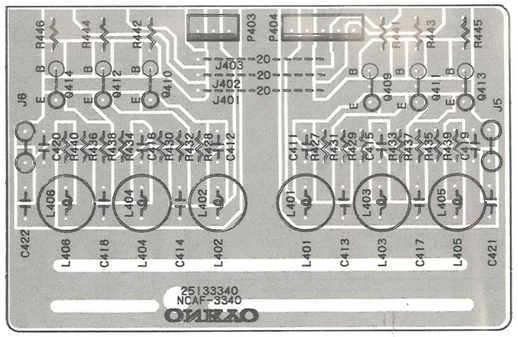
NAAF-3341-1



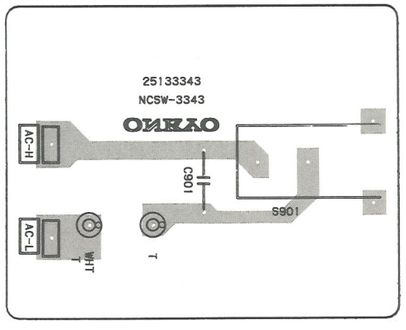
NASW-3342-1



NAAF-3340-1



NASW-3343-1



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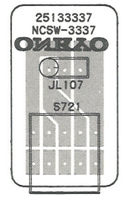
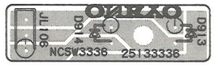
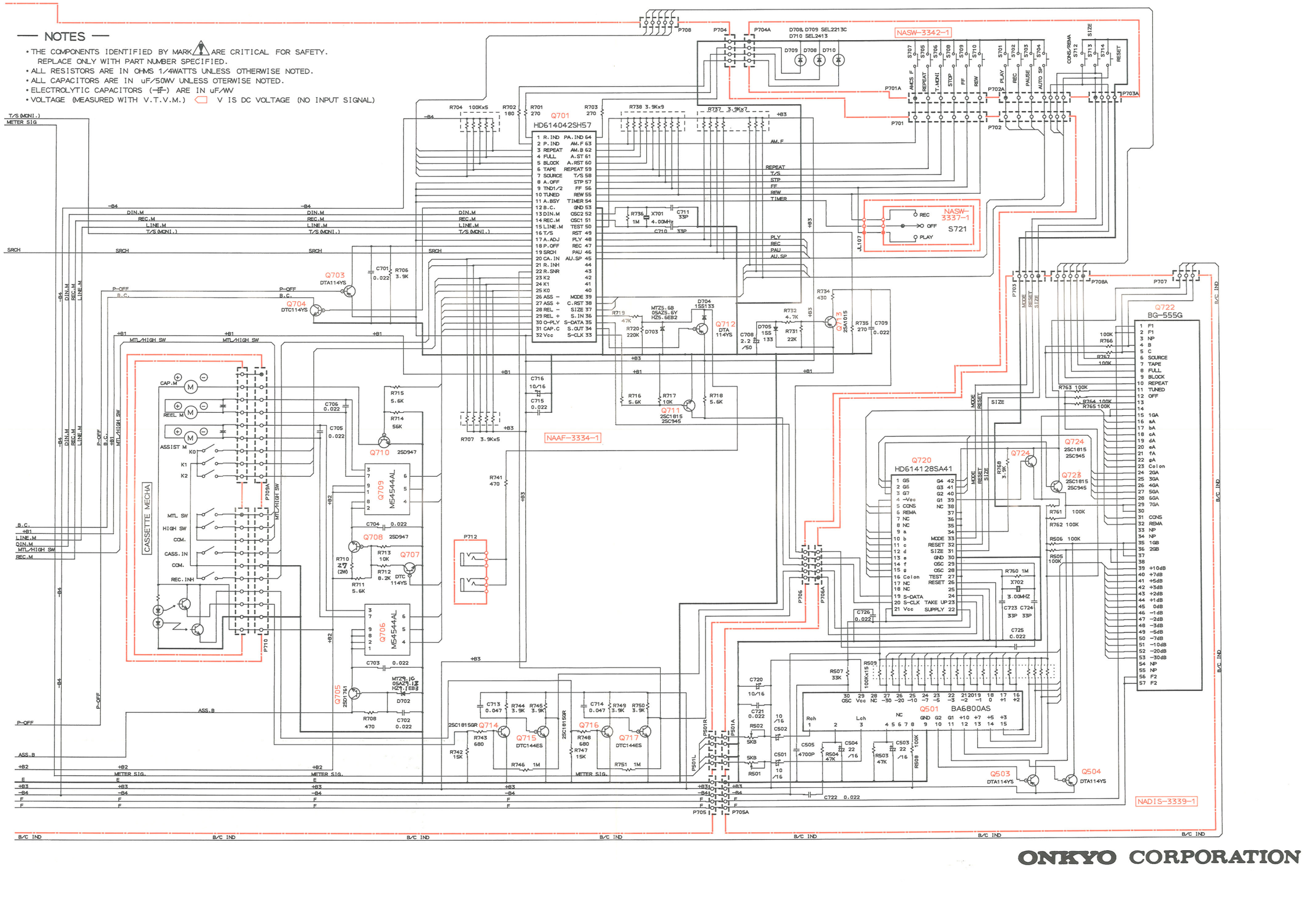


NADIS-3336-1



SCHEMATIC DIAGRAM (2/2)


NOTES
• THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
• ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
• ALL CAPACITORS ARE IN uF/50WV UNLESS OTERWISE NOTED.
• ELECTROLYTIC CAPACITORS (⊕⊖) ARE IN uF/WV
• VOLTAGE (MEASURED WITH V.T.V.M.) V IS DC VOLTAGE (NO INPUT SIGNAL)
Q701 HD614042SH57
Q720 HD614128SA41
Q722 BG-555G
Q501 BA6800AS
Q709 M54544AL
Q706 M54544AL
NASW-3342-1
NASW-3337-1
NAAF-3334-1
NADIS-3339-1
CASSETTE MECHA
ONKYO CORPORATION